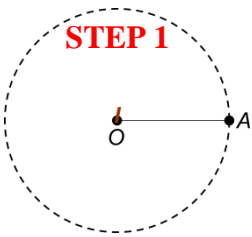


HOW TO SQUARE THE CIRCLE!

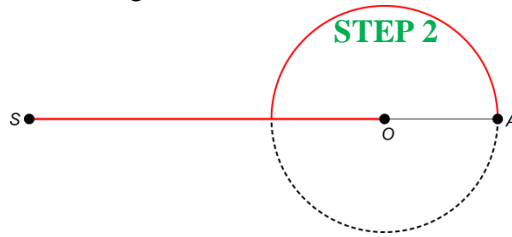
Please tag your photos and videos #WESTC

We use unmarked ropes and pegs. We do *not* use compass and straight edge. (That's impossible!)

When a black dot • appears in a diagram, hammer a peg into the ground!

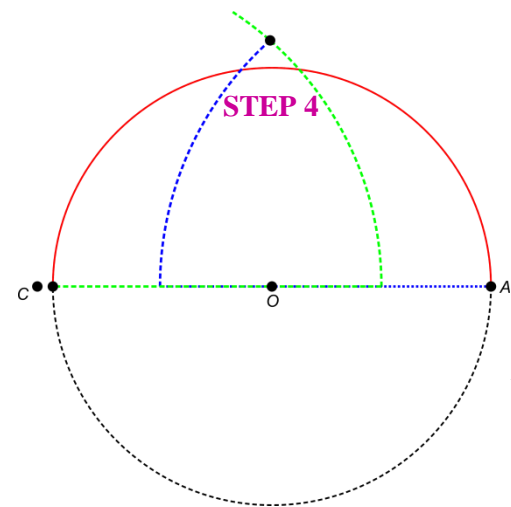
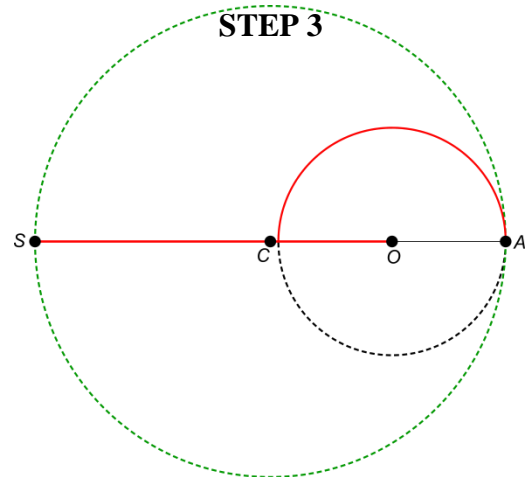


In **STEP 1** ← a pegged rope is rotated around O to draw a circle. The radius, (r), is the arbitrary unit of length OA .



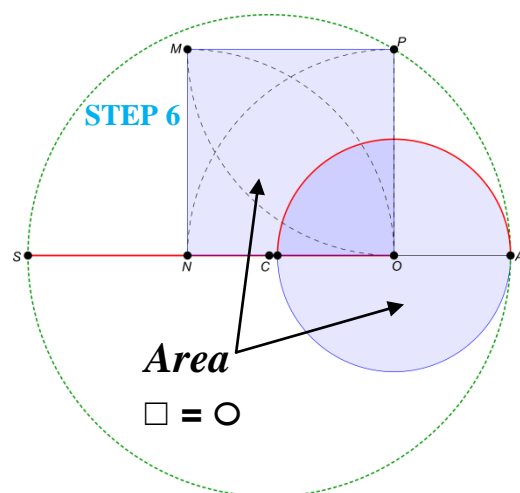
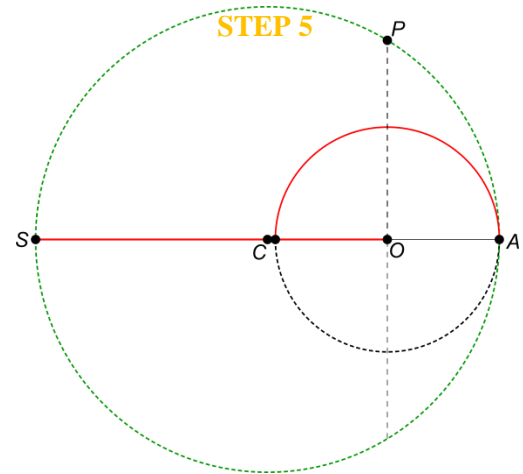
In **STEP 2** ← a rope (shown in red) is laid on the top half of the circumference and cut, (or pinched and held). This rope is then extended leftward from O . We now have pegs at A , O and S .

In **STEP 3** → we bisect SA at C and place a fixed peg at C . (A length of rope is easy to bisect!) With a rope pegged at C , with length SC , we draw a circle around C , (shown in green dashes).



In **STEP 4** ← a perpendicular line is found from O . To do this, simply rotate the same length of rope about each end of the diameter of the circle we are squaring. The point where the two arcs intersect gives us a temporary reference point for our perpendicular line from O .

In **STEP 5** → a peg point is made at P , where the perpendicular from O meets the green outer circle. A 'master rope' of length OP is created, shown as the dashed line from O to P . This is the first side of our desired square.



In **STEP 6** ← the master rope, OP , is swung around O , (anti-clockwise), to create the peg point N . Then the master rope is swung around peg point N , then peg point P , to create intersecting arcs at peg point M . Ropes pegged around $OPMN$ then produce a square with the same area as our initial circle. **Behold! The circle is squared!**

Resources www.bit.ly/squaring-the-circle

Here you will find free downloads, more beach mathematics ideas and photos, a **published proof of the method** and the chance to ask questions and share your circle squaring experiences. **Hashtag** #WESTC (WE Squared The Circle!)

THANK YOU!

www.jonathancrabbtree.com

